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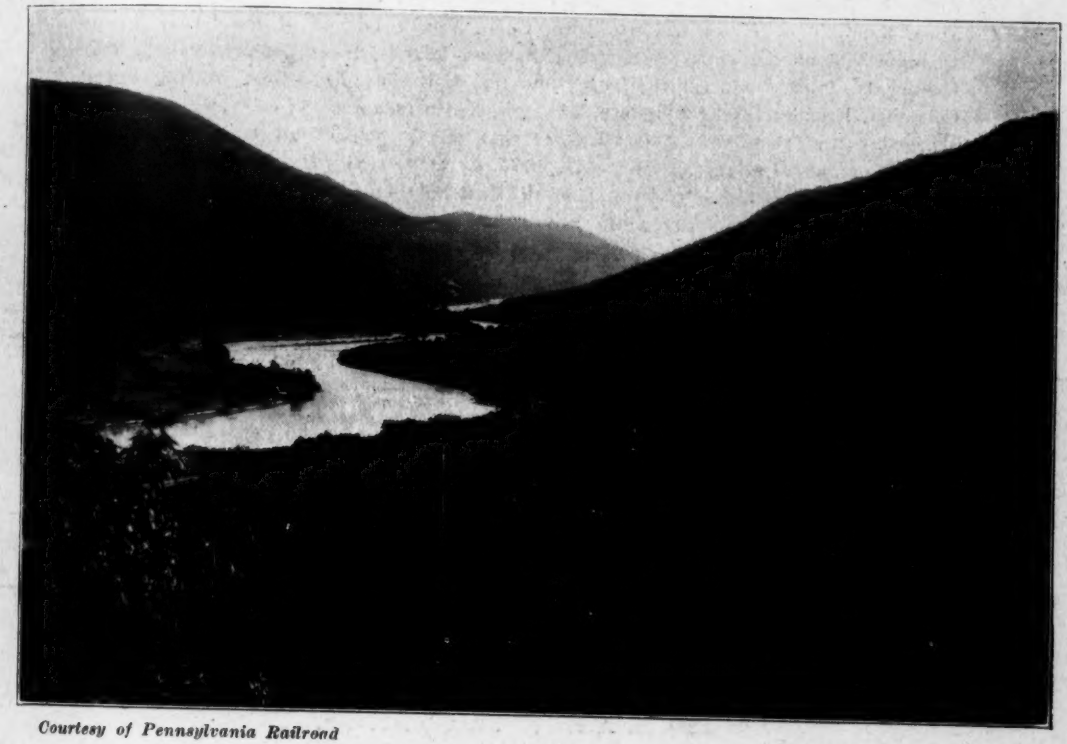
VOLUME XXV OCTOBER, 1926 NUMBER 7



Courtesy of Pennsylvania Railroad

One of the beauty spots of Pennsylvania. The Lewistown Narrows, Juniata River, traversed by river, railroad and highway. The view is typical of the Appalachian Mountains of central Pennsylvania.

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THE JOURNAL OF GEOGRAPHY

A MAGAZINE FOR SCHOOLS

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VOLUME XXV OCTOBER, 1926 NUMBER 7

THE CORK OAK

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There is little in the magnificent old oak shown in Fig. 1 to suggest the common bottle stopper, but it is upon just such trees as this that the world depends for its supply of cork. Indeed, the scarred and rugged surface of this gnarled monarch of the cork oak forest is not chargeable alone to its century long struggle with the elements, but shows evidence as well of the decennial visits of the cork-gatherer's hatchet.

CORK IN THE MAKING

The traveler in Iberia or southern France who would see cork in the making must usually wander from the beaten paths for the cork oak forests are likely to be in the inaccessible hills and mountains. This interesting tree whose bark furnishes the cork of commerce is an evergreen, native to all the Mediterranean lands. The typical cork oak plantation is in reality a natural forest growth tho often given care, especially in protecting the young trees from pigs and fire, and in pruning and in cutting out undergrowth. The trees may occur in almost pure stands as is the case in parts of southern Portugal, or mixed with pines and other species of oak as is true north of the Tagus.

Should his visit be timed in late summer or early fall the visitor may be fortunate enough to witness the cork harvest (Fig. 2). Stripping the cork requires considerable care so that the bark beneath may not be injured. With a long handled hatchet such as is seen in Fig. 2, the cork bark is cut around the base and also where

the tree begins to branch. Longitudinal cuts following the natural cracks in the bark are then made between these circular incisions. Inserting the wedge shaped handle the bark is pried off in large cylindrical slabs. The same procedure is followed for the larger limbs. Normally the cork slabs are from one-half to two and one-half inches thick while the yield from a tree ranges from 50 to 165

Courtesy Armstrong Cork Company, Pittsburgh.

Fig. 1. A veteran of the cork forests of Spain

pounds.[1] The first or virgin stripping usually made when the tree is about 15 to 20 years of age yields a coarse, rough, dense cork of little value. Successive strippings at intervals of 8 to 10 years yield finer cork, the best grade being reached at about 40 years. The trees

[1] One tree in Estremadura, Spain, is reported to have yielded 3960 pounds in a single season.

Courtesy Armstrong Cork Company, Pittsburgh.

Fig. 2. Stripping cork in a Portuguese cork oak forest. Note the long handled hatchet. In North Africa a crescent shaped saw is used instead of the hatchet.

Courtesy Armstrong Cork Company, Pittsburgh.

Fig. 3. Weighing cork bark in the forest near Seville, Spain

have been known to continue to yield and thrive for a century and a half or more after the initial stripping.

After removal from the tree the cork is allowed to dry out for a day or two, weighed, (Fig. 3) then boiled. This latter process removes much of the tannic acids, allows the outer layer to be easily scraped off, and makes the slab pliable so that it can be more easily packed. The scene of these operations is usually at some distance from the railway, often in the mountains and reached only by mule trail. The bark is transported to the railway on the backs of burros, sometimes in trains of 50 to even 100 animals.

Courtesy Armstrong Cork Company, Pittsburgh.

Fig. 4. Bringing the cork from the forest to the railway station. A scene in the mountains of Portugal

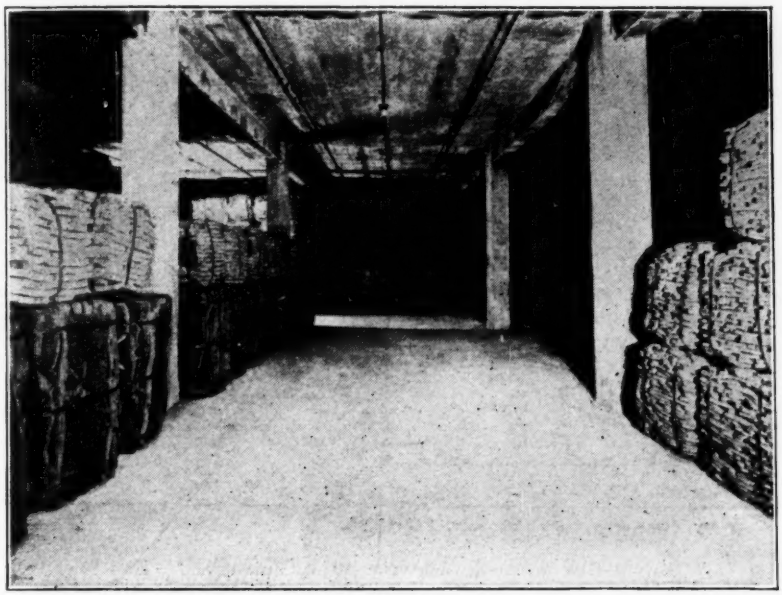
Loaded from tail to ears, literally buried under a pile of cork, these animals look grotesque indeed, as they pick their way down the mountain trails and thru the narrow village streets (Fig. 4).

At the large centers such as Seville, Barcelona, or Lisbon, further sorting, trimming and baling prepares much of the cork for export.

DISTRIBUTION OF THE CORK OAK

The cork oak thrives best on granitic lands and sandy soils rather than on the limestone areas. The product from trees grown

on shallow stony soils is thinner but of better quality than that grown on deep fertile soils. The forests usually occupy the rougher sections at moderate altitude between 34° and 44° north latitude. There are marked differences in the color, texture and porosity of the bark from different regions, reflections of wide variations in soil, climate and topography. Estremadura and Catalonia, for example, produce high quality cork, used for bottling the best wines. Andalusia on the other hand, except in limited sections such as Ecomienda produces a lower grade product used chiefly for the cheaper wines, beer and mineral waters. In general Iberian cork is much preferred over that from Africa which has a disagreeable odor.



Courtesy Armstrong Cork Company, Pittsburgh.

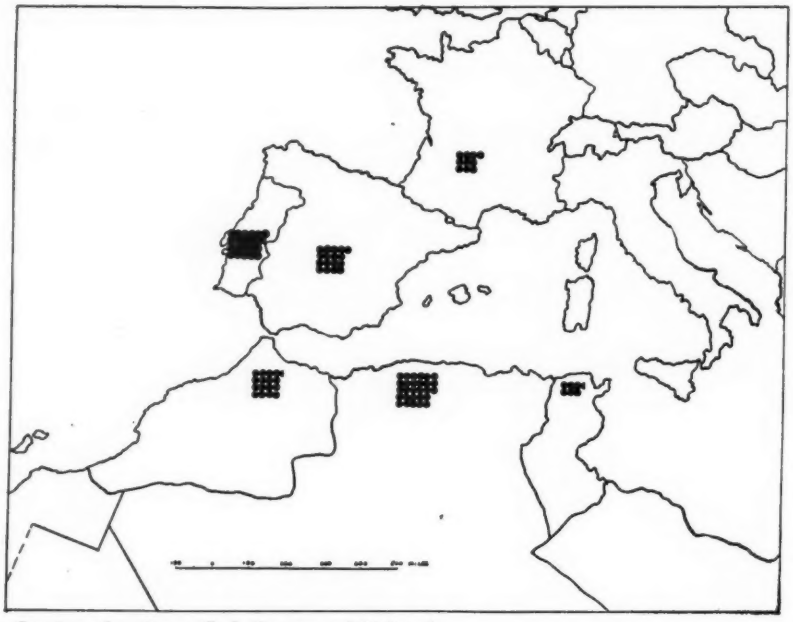
Fig. 5. A Pittsburgh warehouse filled with cork from Seville, Spain. These bales weigh from 160 to 200 pounds each.

Tho the cork is indigenous to all countries bordering the Mediterranean it occurs in abundance only in the western half of that basin. Fig. 6 shows the bulk of the acreage to be centered in Iberia and the adjacent fringe of North Africa. The total area of the world's cork oak forest is estimated at 3,763,800 acres, approximately the same as the Spanish olive or grape acreage and almost as large as the Brazilian coffee plantation area. Algeria leads with

28 per cent of the total, followed by Portugal, Spain, Morocco, France and Tunis. The total acreage is almost equally divided between Africa and Europe.

PRODUCTION OF CORK

A comparison of Figs. 6 and 7 showing the acreage and production of cork discloses considerable differences in certain areas. North Africa for example is shown to possess almost 2,000,000 acres of cork forest or over one-half the total for the world. Its



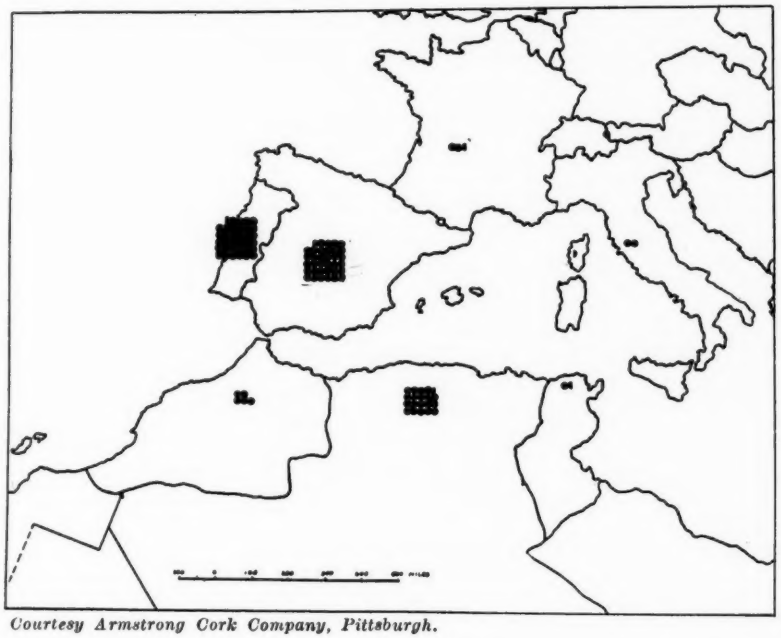
Courtesy Armstrong Cork Company, Pittsburgh.

Fig. 6. Distribution of cork oak forests by countries. Each dot represents 1 per cent of the world's total acreage. Based upon data from Zon and Sparhawk, "World's Forest Resources."

production accounts, on the other hand, for only one-fourth of the total cork output. An explanation of this condition may be found in the fact that much of the North African forest is inaccessible and therefore unexploited; other portions, e. g. in Tunisia have been worked for tan bark rather than cork, the exploitation for cork being comparatively recent. In Morocco much of the cork forest has been ravaged resulting in a markedly decreased output. With a more stable government, the establishment of wise conservation measures and the development of transportation, the production

of cork in North Africa should be greatly increased. Morocco, especially, may well rival Spain as a cork producer.

The most notable centers of world cork production are the Tagus Valley and southward in Portugal, and Estremadura, Andalusia and Catalonia in Spain. Portugal probably produces more than Spain but exports considerable quantities, much of it low grade, across its frontier to the latter country. Spain imports in addition



Courtesy Armstrong Cork Company, Pittsburgh.

Fig. 7. Cork production by countries. Each dot represents 1 per cent of the world's total production, based upon data from Zon and Sparhawk, "World's Forest Resources."

to this supply much low grade cork from North Africa. Catalonia, especially about Barcelona, is the most active cork manufacturing region of the important producing areas.

The production of cork has fluctuated markedly in recent years in response to market changes. The War made enormous demands on the cork producers for life belts and cold storage packing. Post war developments have, however, served to depress the industry and have culminated in producing a critical situation in the Spanish producing centers.

Prohibition in the United States, the loss of the Russian and German[2] markets as well as protected cork manufacturing indus-

tries in other countries have severely affected the Catalonian manufacturers of bottle stoppers. Contributing to the present condition are the technical changes in the industry: the invention of the "crown"[3] stopper and various substitutes for bottle corks. Spain possesses approximately 1,500 cork "factories" employing 35,000 people and exported in 1924 some $14,000,000 worth of cork. Four countries alone, the United States, Great Britain, France and Germany, take about 85 per cent of the world's cork output so that the defection of any one of these entails serious consequences in countries in which cork is an important export.

UTILIZATION

Its lightness, imperviousness to both air and liquids, its elasticity and poor conductivity of both heat and sound have resulted in a wide range of uses for cork. Its adaptability as floats for fish nets and stoppers for liquid containers has been recognized for twenty centuries. However, its wide use for the latter purpose had to await the introduction of the glass bottle in the fifteenth century. So common has this use become that the term "cork" is perhaps oftener used to designate that function rather than the material itself. Bottle stoppers for wines call for high grade cork and the waste in manufacture is about two-thirds of the total so used. It is estimated that cold storage insulation takes more than half of the world's production and like floor coverings, mattresses, and the packing for fresh fruit, it can utilize the waste cork. The fresh grape export of Spain alone normally requires annually about 1,200 metric tons of cork sawdust.

The acorn crop from the cork oak forests sold as swine food provides a considerable income. It is estimated that in Portugal alone one-third of a million swine are reared on the acorns of the holm and cork oak, the total yield being 200,000 tons of nuts. Cork oak forests are farmed out to pig raisers at $3.00 to $6.00 per pig.[4] The hams from such swine are reputed to have a very piquant flavor.

[3] High tariffs and reduced purchasing power in Germany has practically eliminated a market which formerly took over $2,000,000 worth of cork annually.

[3] The invention of an American cork manufacturer of a stopper made up of a cork disk inside of a metal cap. This not only greatly reduced the amount of cork needed but brought distress to the Catalonian domestic workers who had been able without elaborate machinery to make the ordinary bottle stoppers.

[4] Klein. The Economic Importance to Portugal of the Cork Oak and Its Products. Bull. Agric. Intell. 4:1913:79. International Institute of Agriculture, Rome.

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GEOGRAPHY IN THE JUNIOR HIGH SCHOOL

MAUDE COTTINGHAM MARTIN
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There is at the present time probably no more widely discussed educational problem than that of curriculum making in the junior high school. For fifteen years educators interested in this unit of the educational system have been attempting to analyze theories and processes which were formulated previous to that time and have been modifying the administration in accordance with the result. Now the discussion is centered on the subject matter to be taught, the methods of teaching and the spirit behind the work. An effort is being made to discover the individual characteristics of the pupils and to provide more for each child. This has been and continues to be a period of experimentation. A large share of the attention in this field is being claimed by the social studies.

Geography is placed in this group altho its field lies between the domain of the natural and social sciences. The facts of physical environment are found in the realm of natural science and the facts of human activities in the realm of social science. It is one of the studies with a contribution to make to the aims of education because it can create situations naturally which will produce the significant activities in a child's life that indicate a growing adaptation to his environment. Geography makes it possible for him to think in terms of life elsewhere and because of these facts deserves a full year of study in the junior high school.

To demand a time allotment in the crowded curriculum, any subject must show that its subject matter and inherent objectives meet the needs of the students, the aims of the junior high school and the general aims of education in a more satisfactory manner than any other subject can for the particular year.

CHARACTERISTICS OF THE STUDENTS

Geography is particularly appropriate for pupils of adolescent age because one of the new psychic developments is a sudden extension of interest in space and time. Excess energy shows itself by means of an altruistic and idealistic interest in others. A widening circle of objects and events acquire significance and information concerning groups of the human family has a distinct fascination and interest. This presents an opportunity for the children to

think of their own country in relation to others and gives an opportune time to sow the seeds for desirable attitudes in the future. Not only do pupils of this age desire to read and acquire new words but there is a tendency to be argumentative and coincident with this comes an enlarged power of logical reasoning. Thus by centering the attention on actual problems, argumentation and reasoning may be utilized in a helpful way.

Behavior has a constant social reference and consequently a new outlook on the world manifests itself. Adult life and vocations make an appeal. If in forming a course of study we take into account these impulses we have something upon which to work.

Aims of Education and the Junior High School

Altho geography is not strictly a vocational subject, thru it, specific contributions of geography to the aims of education and the junior high school yet a statement of these will make clear the fact that this subject in a peculiar way can meet their objectives.

Since society actually determines what the schools shall do it seems appropriate to state the aims of education in social terms. It becomes necessary to think of what society expects of individuals in the world in order to decide what the schools should accomplish. Whoever is successful in meeting the responsibilities of life must be efficient in health; in some occupation; in the use of leisure; in his duties as a citizen, and in his moral and religious life.

Altho geography is not strictly a vocational subject, thru it, it is possible for the pupil to make a survey of the world's work so that he may select his vocation and at the same time develop an appreciation of proper relations between the members of the chosen vocation, between different vocational groups and between producer and consumer.

A point of view may be gained which will allow the individual to take his part in the community and give him a basis for an understanding of state, national, and international problems. For such citizenship he will need among other qualities a diversified interest in the welfare of the community in which he belongs.

There is danger that people may not know how to use their leisure. The teacher of geography has many opportunities to teach the pupils how to employ their leisure time. An opportunity is given to implant a love for industry, an interest in one's fellow man, the out-of-doors and a desire for travel and travel literature.

In addition to these general aims, geography furnishes worth while subject matter which is valuable for the common integrating

education; for furnishing those common ideas necessary to the solidarity of a democracy. It is especially suited to the adolescent age where the avowed purpose of the educational unit is to give the pupil an opportunity to become acquainted with the trades and skills so that he will have something on which to build his future. From this study he may gain ideals of honest work and an appreciation of the relation of one's work to the world's work. Thru geography one may hope to teach the child to do better some of the things which he will do anyway. This is the age when he is especially interested in people and in his own relations to society; the age when he has a keen interest in society at work in industry and in the conquest of nature. He looks at everything in a critical way. When could there be a better time for breaking down racial and national antagonisms and substituting a feeling of sympathy and kinship?

Aims and Purposes of Geography Teaching

The distinctive functions of geography are (1) to describe and explain the relationships of man to his environment, but the study must be pursued as a science so that the knowledge of physical features, climate and natural resources, which are determining factors in the relationship, may be definite and exact; (2) to examine and interpret adjustments which groups of people have made to the combinations of natural environmental conditions that exist in the region in which they live; (3) to explain why men use the land and its resources as they do; (4) to study the possibilities in the regions of the world for the utilization by man.

The decision as to what should be included in a school course depends on our understanding of what a pupil should gain from his study of geography. The desired result may be considered under three heads, first, knowledge of geographic facts and principles, second, the power and skill to use that knowledge, third, the attaining of desirable attitudes.

Knowledge of Facts and Principles

We are no longer satisfied to have the child's mind stored only with the facts of "sailor geography." There is the wish to build up an interest which is immediate and capable of growing and the emphasis is now placed on the reason for geographic facts. However, the emphasis on principles does not mean that facts should be omitted. Each principle must be illustrated by concrete evidence in order to be of any value. It is difficult to decide which facts should

be taught but this doubtless is determined by the value given them by the outside world. A group of facts should be taught which are valuable and appropriate for the particular grade.

The relationship which exists between the life and work of man on the one hand and earth features on the other especially concerns us. The importance of a physical feature in the life of man should determine the amount of time given to it. Since the material bases of social development are determined by the dependence of man upon earth's conditions and resources, this dependence and interdependence of the people of different countries is valuable knowledge. It is essential that pupils learn the conditions of countries with which we have transactions and that they know in a measure the problems of the business man in locating materials and markets. To build up an international point of view students must be taught how other people live; taught facts concerning the resources of foreign peoples, something of their character, their hopes and ideals. We do not know how to vote on questions of international policy, yet such questions arise continually.

Thru communication and transportation the environment affecting each group of civilized people has come to embrace the entire world. Such an appreciation of world unity and the interdependence of man will, in a large meaure, help the pupil to become an intelligent citizen of the world.

In a study of physical features which is necessary in order to understand relationships we are building up concepts of the origin and history of land forms that stimulate the imagination in a wholesome way. This study is of special interest to one who reads and travels. Thru the acquired knowledge of facts and principles the pupil understands what he reads and the conversation which he hears.

The course should be planned so as to give an opportunity to use the acquired facts and principles in problem solving. A familiarity with geographic principles does not mean a power of independent geographical reasoning. Pupils will not be able to solve for themselves problems dependent on geographic conditions but thru familiarity they will be better able to appreciate the arguments of others. The principles will be a part of their working consciousness.

ATTITUDES

Thru the practice in using the facts and principles of geography we hope to build up certain desirable attitudes which may be en-

couraged more directly by geographical study than by any other. The great problem of today is, How may the nations live together in peace? What economic and commercial relations can be fairly established? We have before us the problem of establishing and maintaining equitable relations among all people. This problem will need to be met by those who are now children. Since the problems of other nations are associated with the surroundings and develop because of the regions in which they dwell it is the problem of the geography teacher to help the pupils to get the point of view of foreign people. To think of the lives of nations and communities in relation to their environment provides one indispensable prerequisite to an understanding of their problems and their attitudes.

In later life pupils should be able to place many current events in their regional setting and view the problems sympathetically. Many problems in the business world will have a greater significance if geography is properly taught.

It is possible to arouse an interest in the social phase of commercial products. When the importance of commodities, such as, wheat, coal, and iron is understood it is not hard to stimulate the thought that the producers of this wealth are worthy of consideration; that the health, intelligence and general comfort of laborers are factors in production; and that there is dignity in labor.

Thru geography comes a knowledge of the scenery and beauty of the countries of the world and because of this knowledge there comes an enjoyment of the natural elements and forces. Regional geography stimulates a desire to travel while physiography and commercial geography make interested and intelligent travelers. Much of the beauty of the world depends upon our ability to see and interpret it.

Breadth of outlook, depth of insight, clearness of sympathy, are all cultivated by geographic studies because geography breaks thru the barriers of prejudice and thru national and racial antagonisms.

The problem for the junior high school is to construct a course which will build up desirable attitudes, teach a certain body of knowledge and give training in the use of it.

OBJECTIVES OF JUNIOR HIGH SCHOOL GEOGRAPHY

The children in the elementary school build up certain concepts of physical earth forms and hence become conscious that all people do not live in the same way. They have some understanding of the relationship which exists between the physical environment and the

necessities of life. They understand in a measure the interdependence of people. In the junior high school the aim is to make them more conscious of the interdependence of people and of world unity by a more detailed study of their own country and of the world. This is only possible with pupils older than those of the first six grades. It is our desire to have them acquire a more detailed knowledge, more geographic principles and a point of view which will help them to solve the problems facing the community. People are the central figure in both elementary and junior high school. In the intermediate grades the emphasis has been placed on life in the different regions and the reasons for its distribution. The junior high school goes a step further and shows the relationship among the different regions and emphasizes more and more the relation between man and his geographic environment. The elementary school tends to work from consequence to cause while the junior high school tends to work from cause to consequence.

THE COURSE OF STUDY

The course of study must be based on the work of the earlier grades; must be adapted to the child's interest; must contain a fund of practical knowledge and must present the situations which will produce significant activities in a child's life.

Life in various parts of the world has been studied. Some of the essential facts concerning each of the continents and some of the geographical principles have been emphasized. The children need a broader information concerning their own country and the countries with which we transact business.

The United States has been studied once probably in the fifth grade, but the pupils were too immature to understand the relations among the different regions or to think of the United States in relation to the world whole. At that time it was studied as a part of the continent of North America with emphasis on the home country. The aim was to show why there are so many kinds of work and workers. The purpose of this study in the junior high school is to give not only a review but a new view of the United States as a country and of it in relation to the rest of the world.

In the elementary grades the general life of the people was stressed. Now the economic aspects may be analyzed. The children are older and can grasp principles which could not be understood in the lower grades.

There are four general impressions which should remain with the children.

1. There is an interdependence existing among the different sections of the United States and between the United States and other countries. In other words there is world unity.
2. Certain sections of the United States are old industrially and certain sections are young. Trade arises because individuals and groups of people having different goods exchange their surplus to mutual advantage.
3. Methods of earning a living are not static but are related to geographic environment. As economic conditions change in our own country our trade relations with other countries change. Competition with other countries increases and decreases.
4. The United States is becoming more and more a manufacturing nation and altho it is interested now and will ever continue to be interested, in the east-west trade of sending food and raw materials to Europe it is interested in developing a trade with the tropics and with other countries which will supply raw materials and even temperate foods.

This necessitates a regional study of the United States and a study of competing and supply countries. The United States can be divided for study into five regions namely: the Middle West, the East, the South, the Western Interior and the Far West, in the commonly accepted meaning of the terms. Each region has outstanding characteristics which are closely correlated with natural physiographic regions. This will lead to a study of the different types of environment as they affect the different ways in which men earn a living; will mean an acquaintance with the natural resources and the distribution of useful products; and the need for conservation.

As each region in the United States is studied the similar crops and types of work may be located in other parts of the world to show competing countries or if there is need for a particular product in any one section of the United States areas of production of this product may be located. This will give an opportunity for study in any way that individual initiative dictates. All should know whether the region in a foreign country is an importing or exporting section of a particular commodity. If it is an exporting area the children should learn which nation can use the surplus. It is worth while in this connection to use some statistics and the

trade route maps to learn from which country the United States is buying, to which it is selling and to have some idea of comparative amounts.

The study of the United States in its world relations should be prefaced by a review of latitude and longitude, a study of the change of seasons and of wind belts so that maps illustrating climate may be interpreted in an elementary way but with understanding.

A review of the life of some of the simple people who are self sustaining is valuable for an introduction because it gives an opportunity later to compare the simple life with the more complex and to show that in a complex society no group is self-supporting.

Such a course will be sufficient for a year's work for many children. Those of superior ability will have from three to four weeks at the close of the school year to make a more detailed study of a few countries with which the United States trades or countries with which this country may have a close relation in the future. But in any case there is abundant opportunity for the children to study the home country in relation to the rest of the world as their ability permits. In the concluding study the questions should be similar to those used thruout the year. How are the people earning a living? How does life in a foreign land compare with life in certain sections of the United States? Of what significance is this to us as a country?

A regional study of the United States is suggested because it gives a complete picture of the area. The interdependence between regions is clearer than when separate commodities are studied. Likewise the relation between the different kinds of work in the region is more emphasized. Such a study gives a basis for understanding how similar conditions of environment operate elsewhere but in no way minimizes the importance of political divisions.

COMMERCE AND INDUSTRY: ITS PLACE AND FUNCTION IN A COMMERCIAL COURSE*

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Commerce and Industry is practically another name for the study called Commercial Geography. It is not technically commercial as bookkeeping and shorthand are but is valuable to the course as I trust I shall lead you to see before I finish.

My subject divides itself into two main parts, the practical and the cultural. Often times the practical and cultural are combined. On the practical side the subject gives to students a knowledge of the products of the world and the conditions surrounding their production. It gives a knowledge of commercial countries, their stages of development, their products and their needs. It gives a knowledge of the various types of industries, agricultural, manufacturing, mining, herding, etc., and the conditions which make each industry possible.

Much needed work is done on the practical side in locational geography as this course furnishes the only geography since the eighth grade in school.

THE PLACE OF TRANSPORTATION

Transportation, its development from trail to railroad, sail boat to ocean liner, finds an essential place in the practical phase of the study because of the dependence of modern commerce upon rapid transportation.

What happens if such transportation is lacking is evidenced by the conditions of the mountain whites of Kentucky and Tennessee and the nations of the Andes. Mr. Harry Franck, the noted travel writer, tells in his "Vagabonding Down the Andes" of native Indians so backward that they slept on the ground at night under the tarpaulin with the pigs. Miss Ellen Churchill Semple, the noted anthropogeographer, found a woman in the mountains of Kentucky who lived just twelve miles from her parents and in the ten years of her married life had not been back to see her parents

*Paper read at the meeting of the National Federation of Commercial Teachers, Cincinnati, Ohio, December, 1925.

once, because they lived over the mountain and there was no transportation route connecting. Miss Semple also tells of a small town in West Virginia in which the price of butter and eggs was almost nothing and any excess of either could not be disposed of as everybody in the little village had a supply or an over-supply of his own. At the same time, furniture, dry goods, and tools were almost prohibitive in price because they could not be gotten without several days journey on horseback. Then one day a railroad was put thru. Egg and butter prices jumped up to normal for elsewhere because now there was a market outside; furniture, dry goods, etc., dropped to normal because there was transportation from the source of production. We realize what happens when up-to-date transportation exists when we consider that New York is now five days from Liverpool by boat and less by airplane; that the Sahara has been crossed by automobile; that, by means of refrigeration, lettuce can be sent two-thirds of the way across the United States, and fresh peaches can be delivered in Cincinnati in February from South Africa. We appreciate the cheapness of it all when we consider that the day laborer's table takes toll from every part of the globe.

The Scientific Side

That "Commerce and Industry" is the nearest approach the commercial subjects furnish to a science makes it practical from another standpoint. It is, thru its scientific side, a study which leads to clear thinking, which shows cause and effect and aids reasoning to logical conclusions. Can such questions as these be answered without clear thinking? Upon what does the number of draft animals a farmer owns depend? How does each factor operate? Would it stimulate or retard manufacture in England if 100,000 square miles of adjacent sea bottom land suddenly became farm land? Why? Why does tobacco growing suit a tenant farmer better than sugar cane growing? How is frost drainage a factor in locating suitable orchard lands?

Notice how cause and effect must be worked out in answering the following: What are the effects of refrigeration and canning upon the meat, fruit, and vegetable industries? What effect would a large crop of peaches in eastern United States have upon the *use* of the California peach crop? Why does Germany raise potatoes and the United States raise corn for practically the same purposes? Why does England's food supply make it anxious about its navy?

These questions are suggested by the text used here in Cincinnati—J. Russell Smith's "Commerce and Industry"—and by the

reference map book used this year which is compiled by Douglas C. Ridgley and Mabel P. Crompton.

Of the practical value of cultivating the memory I have not spoken. That is taken for granted.

CULTURAL VALUE

If we define culture as that which makes life more worth living aside from any monetary value it may give, then it seems to me "Commerce and Industry" has a high cultural value as well as a practical one. It is education for leisure as well as education for a practical purpose. "Commerce and Industry" gives a student wide interests in reading and conversation. These in turn give a healthy curiosity which leads to an understanding of countries, peoples, environments; a sympathetic insight into the habits and customs of people. Pupils learn why people of the tropics are inclined to be lazy; why the natives of some hot countries grease their bodies; why the Eskimos are backward; what was at stake for the English in the late war; for the Germans.

Imagination is cultivated thru projecting one's self into the future. One of the questions often asked by the teacher is: "Would you like to come back a hundred years hence, a thousand years hence, to see what conditions are then?" Some specific questions by means of which we try to stretch our imagination are such as these: What will be the population density of the United States a hundred years hence? What industries will be engaged in then? How will our foods change? What will happen to our standard of living? What will the power or fuel of the future be? What conditions will exist when the world has a population density of Belgium (600+) or will that condition ever exist? What will be the direction of commercial movements when all the world is densely populated and at a similar stage of development? England is now as near to the United States as Boston was to Washington in Jefferson's day. How much nearer will it become in the future? Will we approach the speed of transportation suggested by J. B. S. Holdane of Cambridge University, that which will make it possible to encircle the globe in one-half second? Will the future population of the globe be limited to the physically and mentally fit?

This course is culturally valuable also in cultivating an open mind. When one thinks of what has been accomplished in the past fifty years nothing seems impossible in the future. Another list of questions illustrating this might be appended here but I forbear.

Results of the Study of World Trade

Practical and cultural values may both be realized thru "Commerce and Industry" in the consideration of World Trade. Primitive man supplies his own wants. He is independent. His neighbors may war among themselves and he not suffer. Farmers in the domestic epoch of agriculture practically supplied their own wants. They grew the wool and manufactured their clothing; they split the trees and made their shelter and furniture; they provided their own simple food. Wars meant little to them. They were practically independent, but they lived without leisure and luxuries, without communication or association with their fellows.

Specialization

Contrast primitive man and the domestic epoch farmer with most people in the United States today. Many do not produce one material thing used in living, clothing, food, shelter, or implements. By devoting our time to one thing exclusively we have attained skill which makes for finer and quicker results, which makes specialists of all of us in our one line and dependent upon our fellow man for every other thing. We are all dependent upon the farmer for our food, the farmer of our own country for wheat, the farmer of far away China for tea, far away Brazil for coffee, Australia for wool, Alaska for salmon. As a nation we are dependent in part upon England, Germany and France for markets for our cotton, wheat, meat; upon developing Argentina as a market for our agricultural machinery; Africa and China as a market for steel girders; upon France, Switzerland, Germany, England for lenses, fine medical and dental instruments.

War among our neighbors *does* affect us. It cuts off our supply of sugar beet seed; the market for our cotton; makes us share our sugar and wheat supply with warring Europe; decreases the number of ships carrying more distant products to us.

Our dependence thru specialization has brought us wealth, leisure, communication, association, which mean progress, a high standard of living, a high state of civilization, but it has made wars among any important countries of the world a menace to any other important country.

Thru "Commerce and Industry" the students are led to see that world trade is today a necessity. World transportation is therefore also a necessity. Then world friendliness is a necessity and that means world peace and that means a World Court or a League of Nations according to one's individual bent.

Effects of Varying Densities of Population

One topic which seems to come to the front in all phases of "Commerce and Industry" is density of population. The appreciation of how population density operates in controlling industry, commerce, labor, wages, stage of advancement and future of a country gives a practical understanding of that country and its people obtainable thru the knowledge of no other single factor.

A country with a sparse population is usually agricultural. Land being cheap the farms are large. Labor being scarce wages are high, resulting in work done by machinery, extensive farming, low yield per acre, high yield per man, great per capita wealth, high standard of living, and independence as to its food supply.

On the other hand, many countries with dense populations are manufacturing countries. This means small areas per man for those who farm, little machinery, much hand labor, intensive farming, large returns per acre, small returns per man, with the result that as population density increases farms become so small that to make a living men are forced to move to manufacturing centers and engage in an industry which requires less space in which to operate. The results of such an economic system include: low wages for there are more men than jobs; more manufactured output than the country can consume; demand for more raw material than the country can supply; a demand for more food than the country can give—hence a dependent country. Illustration—England. In densely populated countries like China where the three or four hundred people per square mile are engaged chiefly in agriculture conditions are much worse.

Use of Daily Papers and Current Magazines

As the course under discussion is conducted it serves to pave the way to an interest in reading current magazines and worthwhile things in the daily papers.

Clippings are brought to class relating to almost every product and country studied. The sources range from the daily papers thru the *Literary Digest* to the *Atlantic Monthly*. The references to the last are few as the students are sophomores, but I was surprised one day to have a boy quote from an article on "Feeding the World" from that magazine. *Literary Digest* cartoons are often referred to. Occasionally each pupil is required to have a clipping on a definite subject. Sometimes each one is asked to have a clipping which is to be discussed in class, on any subject relating to

commerce or industry and the class decides whether judgment has been exercised in selecting the topic.

Information brought to class this fall from the daily papers included the following: effect of delayed October rains on the planting of wheat; the rise in price of wheat due to the appearance of locusts in Argentina; to drought in Kansas and Australia; to too much freezing and thawing in the winter wheat belt; the drop in wheat prices due to the comeback of the Russian crop.

The movements of tobacco from the farms of Kentucky to the nearby towns and thence to the great center of Louisville were followed thru the month of December.

Just now the question of rubber prices and their control by Great Britain is being much discussed in the papers. These articles emphasize the fact that about nine-tenths of our rubber comes from plantations in the East Indies where labor is plentiful because the nearness of the densely populated countries of India, China and Japan. They also show the decline of Brazil in rubber production because of the difficulty of getting sufficient labor in that sparsely populated continent. Watch the daily papers for a week and see how much commercial geography may be gleaned therefrom.

Exactness in English which I suppose finds a place in the teaching in every course is very necessary in this subject because exactness and conciseness in English means clear thinking, straight thinking, logical thinking, comprehensive thinking.

I conclude with the belief that a subject which furnishes desired geographical and commercial information, which cultivates the imagination, educates for leisure hours, furnishes an open mind, gives an interest in world conditions at present and a healthy curiosity as to what the future world conditions and needs are to be, is a very interesting and profitable subject to teach in a "Commercial Course."

SUGGESTIONS TO RURAL SCHOOL TEACHERS OF GEOGRAPHY

VINCENT GATTO
Superintendent of Schools, Raymond, New Hampshire

Experiencing Real Geography Situations

The other day I spent a little time with one of my fourth grade teachers in a rural school. She had been conducting a class in "Home Geography." At the end of the period we were talking about the short afternoons, and the sun setting so early. She remarked that she knew the exact time of the setting of the sun that day because she had been keeping with her class, a sunshine chart, and another for observations of the sun. I was in the same school during the noon hour that day, and noticed two boys measuring the length of the shadow of the flag pole. I asked them what that exercise meant to them. They answered that the shadows are much longer this time of the year then they are in June; that they are shorter at noon than they are towards sunset; that the higher the sun the shorter the shadow, the lower the sun, the longer the shadow.

About a month before I had been present in this school in another geography exercise. A few fourth grade pupils were at the blackboard putting on their drawings, after which they explained to the rest of the class, the arrangement of a set of farm buildings, the position of wood lots, pasture lands, gardens, wells, and the lanes of a farm such as they would like to have. This teacher did not require her pupils to memorize facts out of a book in order to repeat them to her. She and her class were experiencing real geography situations.

Geography Defined

Branom, an important writer of geography, says that "Geography is primarily a study of place relations, and the adjustments which man makes to the geographic regions with their varied resources." Please notice that he does not say that geography is memorizing the names of the states of the Union and their capitals; or being able to repeat the names of largest rivers and lakes in the world; or learning what the imports and exports of a country are. These facts are incidental to the study of geography, and of course, should be known by an intelligent student but, merely learning isolated facts is not studying geography. They do not teach the

child anything about life forms and nature. They do not help the pupil to appreciate relations, nor the adjustments which man makes to the geographic regions with their varied resources.

DUTIES AND QUALIFICATIONS OF THE GEOGRAPHY TEACHER

Before a teacher starts her geography work for the year she should find out exactly what equipment she has. She then ought to make out a list of the things she needs in order to do her work properly. By so doing she is in a position to tell her superintendent or whoever furnishes the school supplies what to get for her. The geography teacher should be provided with a good basal textbook, a good supply of supplementary reading material, wall maps, globes, magazines, periodicals, and a journal of geography.

The geography teacher should have considerable ingenuity and resourcefulness. Nobody can give her these personal traits. They must be developed and acquired by her own efforts, and her attitude toward her profession. If a teacher lacks everything which I first mentioned but, is possessed with ingenuity and resourcefulness, together with a good knowledge of her subject, she will work out her salvation. If she does not possess these spiritual qualities, and the necessary information, and is doing nothing about it, she should go into something that she is interested in.

I know that you do not have all the material to do with. I know the difficulties which you face, especially those teaching in the poorer communities or, in backward districts with the intention of remaining such. Yet the ingenious and resourceful teacher will find ways to overcome her difficulties. The barber furnishes his own tools, so does the carpenter, the stone cutter, the doctor. Why should not the teacher provide the tools of her profession, and at her expense? By this I mean that teachers need and should make use of professional literature such as, books on methods, journals of geography, and so forth to guide them in their work. They are often so situated that material of this nature is not furnished by school officials nor is it to be found in the local library. If such is the case, state libraries, usually located in the capital city, will lend books from one to four weeks just for the cost of transportation. Furthermore if what the teacher wants is not to be had from the state library, she as a true craftsman, should secure her own professional reading. Again, if the only books available for the class are just the textbooks, not supplemented by extra reading, the ingenious teacher will find ways of securing valuable reading material without expense.

Tons of literature, scores of maps and atlases, quantities of material which may be constructed into valuable apparatus lie all about you. It is there for the taking; for you to assemble, to create into new wholes, to satisfy your needs. This is a challenge to your ingenuity and resourcefulness. Many is the radio set made from material extracted from the dump. Many are the libraries which could be collected from the tons of material which many a housewife uses for kindlings, or for wrapping paper. Much is the material which may be rescued from attics!

Our state departments of education furnish teachers with a program of studies which states definitely and concisely what the aims of the various courses are, the amount of work to cover, and suggests pedagogical methods and devices to achieve the desired aims. While I do not think that a teacher should follow her program slavishly, yet I do believe that she ought to read the program carefully, seriously, sympathetically, and adapt it to her situation. Do you read your geography course of study every year; and do you refer to it often?

METHODS

Then there are methods; methods of teaching geography as there are methods to cut a dress, to construct a bridge. Do you know the methods used in the teaching of geography by the best teachers? As a matter of interest let us name a few. There are: the topical outline method; the type study method; the project method; the problem method; the regional method; the journey method. It is not my purpose to enter into a discussion of these methods. I have named them just to open a few avenues of thought, and perhaps to stir a little ambition.

In every course in geography provision should be made for school excursions, in order to learn geography from actual experience and observation as well as from books. Geography can be, and should be correlated with other school subjects such as: history, literature and arithmetic.

TEACH YOUR PUPILS TO DRAW CONCLUSIONS

Do all your teaching in order to develop geographic principles within the children's mental grasp. In other words, present your material in such a way as to enable the child to draw conclusions from the facts studied. In order to make this important idea concrete I will cite an example from Ridgley's recent book on "Geographic Principles," page 37. The topic under discussion is, "A

Study of the Home Town." After the topic is studied from its various angles, the pupils derive the following conclusions in the form of generalizations.

1. "The home town is located where a highway crosses a railroad."
2. "The home town is located where three railroads cross each other."
3. "The busiest district is near the center of the town."
4. "The factories are usually near the railroad."
5. "The better residential district is not close to the railroad."
6. "Because there is a large city near, the home town is small."
7. "The people of the home town and the people of the surrounding country help each other."

It is evident that this form of generalization may be applied to any topic. The final conclusion is that after a child has studied a given topic, even tho he may not retain all the facts brought out in the discussion, he should be able to carry with him, thru life, a vivid impression which, shall include the gist of the subject considered.

GEOGRAPHY'S AFFILIATIONS

G. T. Renner jr.
Columbia University

Changing Aspects of Geography

In the early Greek, Moorish, Italian and Portuguese schools, geography was at different times astronomical, mathematical, descriptive or cartographical in nature. To the Polos, to Columbus, to the Venerable Bede, to Stanley or to Stefansson, geography has meant travel lore, and this explorational aspect of geography continues down to the present day.

In France, geography was arrived at thru the study of history; Ratzel, in Germany used it as an adjunct to anthropology. In the United States, Dutton, Gilbert, Powell and others developed under the name of geography, a new science of genetic or evolutionary

physiography. This was greatly expanded by Davis and his contemporaries and has been carried to a logical perfection and completeness by Professor Douglas Johnson in such works as "The New England-Acadian Shoreline." But examples almost without end might be cited from history to show that it is absurd to assume that geography has always existed as the 'evolutionary land-form-study' which the American geologists and physiographers began to build up in the early part of the nineteenth century.[1]

MODERN HUMAN GEOGRAPHY

The last two decades have witnessed the rise of the new human geography of the type which Dr. von Engeln, in his article "Fresh Air and Sunshine," has called dishonest.[2] He has cited the alleged relation between the end of free farms and a dwindling opportunity, and the literature of despair in the Middle West, as an example of what he terms dishonest human geography. The writer of this paper is a native of the Middle West and is inclined to believe there may be some connection between the two foregoing phenomena. However, he is as well aware as any one, that concomitant relationship does not necessarily imply causal relationship. But even tho the relationship were fictitious it would appear that it is rather a thin argument to condemn a science on the basis of one generalization—and a debatable generalization at that.

Dr. von Engeln points out that the Middle West is not alone in its possession of "the materials for a literature of despair." This is quite true, but in every case the whole story must be told. Hawthorne's gloomy writings years ago in New England were cited, but many geographic readjustments may have been made in New England since the days of Hawthorne's gloom. Australia, notwithstanding the obvious inadequacy of its water resources to afford the basis for its hoped-for future development, is still producing a literature which bubbles over with enthusiasm; but is not the day coming when a different social atmosphere will arise in that country as the doors of opportunity are swung shut by a water supply insufficient to allow for further development? Will not a pessimistic note arise in Australian literature as there occurs a changing relation of man to his environment? Will this new social tone when it does appear be in any way related to the envi-

(1) Dr. O. E. Baker in a paper read before the American Economics Association in New York City, Dec., 1925, clearly outlined the changing aspects of geography and the reasons for the varying emphasis which has been obtained in geographic study.

(2) *Journal of Geography*, March, 1926, page 97

ronmental facts or will it be dishonest to explain it as such? It may be a fallacy to link social atmosphere with environment but still Florida and California are not producing pessimism in spite of the swarming there of human beings, which phenomenon constitutes the sole reason for morbidity and pessimism according to the author of "Fresh Air and Sunshine."

Untwisting the Definition of Geography

He further states that there are two kinds of geographers—those who define the science as "the study of the earth as the home of man," and those who define it as the "study of man making himself at home on the earth." In cataloging the new human geography under the latter definition he, like many others, has missed the point altogether. Human geography deals not with the study of man as he implies, but with a study of the relations of man's activities to the environment. In other words geography is a study of relationship.[3] Another point which is so often overlooked is that altho the old school of physical geographers defined geography as "the study of the earth as the home of man" they never lived up to their own definition. Dr. W. M. Davis defined geography in just such terms and then included such material as "The Rivers and Valleys of Pennsylvania" in his book called "Geographical Essays." Such works as Davis' essays are excellent physiographic studies of the earth itself, but as studies of "the earth as the home of man" they make no contribution. In short, the work of the physical geographers fell short of their own definition because they were equipped to handle but half of their subject.

Geography's New Affiliations

In spite of the accusation that the definition of geography has been twisted so to make that subject a pseudo-social science, this has not been done. Modern human geography would exist just as surely under the old definition as under the new. Studying the earth as the home of men cannot be accomplished unless the student knows something about man and his activities and this necessitates a familiarity with economics, commerce, sociology, anthropology and history, just as physiography is essential to a knowledge of the environment—but neither can be called geography until shown in relation to the other. Thus the latest definitions of ge-

(3) Dr. W. S. Tower has set forth a very excellent analysis of the relation of the content of geography to its subdivisions in the article, "Scientific Geography" in the *Bulletin of Amer. Geog. Soc.*, Vol. XLII, No. 11.

ography are not perversions but honest restatements of old ideas with a view to rendering clear the idea of causal relationships embodied in that science. Neither are the critics of modern geography warranted in their statements that economics, sociology and history are being substituted for a study of the physical environment. Instead, economic, social and historical ideas are being added to physiography with a view to establishing relationships between the two. In this way, geography is being enriched and given a real significance. The writer agrees with Dr. von Engeln that it would be a mistake to substitute a form of social science for geography or even to lean too heavily on the social sciences. But the injustice to geography would be just as great should the geographer lean toward the physical side. Indeed it is futile to lean either way. Hence the writer insists not only upon the inclusion of the social side of geography but upon the necessity of having both sides included.

The author of "Fresh Air and Sunshine" has expressed a fear that geographers are having too much to do with sociology and history. Perhaps this is but the natural distrust of the unfamiliar, but it is indeed strange that any educator should fail to welcome the breaking down of the artificial barriers which unfortunately exist between the sciences. Perhaps the author has been misunderstood in this for it may be that he merely mistrusts the social sciences. He says "it is not without significance that if you give the sociologist opportunity for research his first idea is to investigate a prison or slum." This may well be true for altho sociology and history have their happy sides, it is only the things that need curing or bettering that need much investigating. Things already happy and sound need slight investigation.

If the charge that modern human geography is untruthful be followed up, genuine cases of mistakes and dishonesty can easily be found, but is physical geography all entirely truthful? Probably more mistakes have been made and falsehoods have been told concerning peneplians alone than in the whole field of economic geography. Among last generation's physical geographers, it seems to have been a universal aim for each to invent or discover a new peneplian and write a book on it to cap off his life work.

REGIONAL GEOGRAPHY AND THE PUBLIC

Dr. von Engeln tells us that the automobile has set the American public free to travel and as a result "the forms of the land begin to have meaning" and "it is no longer assumed that because

the hills of the home farm have a certain shape all the country of the world is on a glacial moraine." This last is obviously absurd because few farmers are even aware that they are farming glacial moraine, or know whether the hills of their farms are kames or drumlins, or can date them as belonging to the Illinois or Wisconsin sub-stage. And what tourist knows whether he has just crossed an obsequent or a subsequent stream, or whether he is traversing a synclinal or an anticlinal mountain?

The whole nation *is* becoming familiar with regional geography but not with the kind of geography that is mentioned. Instead, the public is coming to talk familiarly about the Corn Belt, the Western Ranch country, the Eastern Urban Region, etc. Indeed, these human-use regions have long been familiar to business men, manufacturers and travellers because they exist in an obvious and impelling way and not as mere academic classifications.

The Cry of Back to Physiography

Geographers are warned that it is "high time that we learn more about latitude, climate and soil in the grades." But latitude or geomatics is a form of geometry, meteorology is physics pure and simple, facts of soil are already taught in agriculture and agronomy. Why then should geography teach these things *as such* in a formalized way. If this be the subject matter of geography then that subject has no unique contribution to make and it is no wonder that this kind of geography as a grade school subject is dead. Even if it were still present in the grade school curriculum it would illy lend itself to modern problem teaching.

When Dr. von Engeln further writes "high time that physical geography be restored to its former great prestige in high schools," he is overlooking the cardinal principle in curriculum making. Subjects appear in the curriculum where there is a social need for them and when they are dead and have disappeared from the course of study we may safely assume that the social need for them is gone. The readers of the *Journal of Geography* are all familiar with the present day constant appeals for the reinstating of Latin, Greek and theology in the curriculum. So it goes with numerous passing subjects which have outlived their usefulness.

Physiography as the surficial aspect of geology is today more vital than ever before—indeed it is at the very height of its development as a science, but physiography as geography is a thing of the past; even its warmest advocates have admitted that thru their very lamentations over its passing. Can it be said then

that it is "high time that geography departments in colleges and universities renew their affiliations with physical geography, meteorology and geology" when such affiliations have never been discarded nor even weakened? But the classification and teaching of geological, physiographical and meteorological facts as geography broke down of its own accord thru a lack of curricular utility, whereas the new affiliations with economics, sociology and history have arisen because there was an active need and demand for such. Can a response to a need be sacrificed to a time-worn academic practice?

So instead of trying to force a form of geology back into the curriculum under the name of geography would it not be far better to actively cooperate in developing the new geography which today stands as the much needed interpretative link between the social and physical sciences? Instead of regretting a passing order, would it not be far worthier to assume the task of developing the new affiliations of geography?

The Significance of Fresh Air and Sunshine

Geographers are asked to avoid having anything to do with the affairs of men which are ugly and sordid but instead to devote most of their study to the environment which is pleasant and clean. In other words, the appeal is made for more 'fresh air and sunshine' in geography. Fresh air and sunshine are indeed essential in geography but they themselves are not constant factors. They are one thing in the small village but quite another to the slums or apartment houses of New York City. They are interwoven very differently into men's lives in Southern California, Southern Chile or Spitzbergen. Even these factors then possess significance only when viewed in relation to the economic and social life of man. A climate is hot or cold or disagreeable or pleasant only when measured in terms of man's reactions. Thus a geography which is not a human geography is indeed a futile thing.

Modern tendencies in geography can not therefore be regarded as a deplorable adoption of new affinities but should be recognized as the useful evaluation in terms of human values of what was yesterday taught in so futile and unmeaning a way.

A REJOINDER TO "GEOGRAPHY'S AFFILIATIONS"

O. D. VON ENGELN
Cornell University

INTRODUCTORY

The editor has asked me to contribute a brief rejoinder to the paper "Geography's Affiliations" by Dr. Renner, which itself is a reply to "Fresh Air and Sunshine." After reading Dr. Renner's paper my first thought was that the best rejoinder would be to let it stand as representative of the viewpoint of the human geographers and to permit readers of the *Journal* to be the judges of the relative merit of the contentions in the two papers, without further comment. However, as it is unlikely that many readers will compare the two papers it is perhaps desirable to provide a specific reply.

DENIALS

1. In "Fresh Air and Sunshine" it was not assumed or asserted "that geography has always existed as the evolutionary land-form-study."

2. In putting it under the definition "study of man making himself at home on the earth" the point to the new human geography was not missed. If Dr. Renner's interpretation of the definition were to be accepted then the definition should stop at "man." In the next sentence he furnishes a phrase that permits a true interpretation in terms of his own choosing. He says: "Human geography deals with the study of the relations of man's activities to the environment." Quite so. But I was contending that the appropriate approach is to make geography in its broadest sense "a study of the environment in its relation to man's activities." Mind I do not say geography is a study of the physical environment. This is physical geography, a branch or specialized department of geography, not of geology, even if some writers of textbooks on geology do include a discussion of ocean currents as part of that subject.

3. The book "Geographical Essays" is a selection from Professor Davis's writings made by Dr. Johnson, and it may be presumed that Dr. Johnson bestowed the title. To characterize the essays it contains as making no contribution to the study of the "earth as the home of man" is absurd because they are not re-

presented as such, except by the implication Dr. Renner finds in the title.

4. It was not asserted that modern human geography is or must be untruthful or dishonest, only that so much of its scope or content as is ordinarily and regularly emphasized and developed in grade school elementary texts is misleading. If it is actually desirable that thru geography the children become informed chiefly concerning man's activities in relation to the environment then the honest thing would be to engage in a recital of sour sweat in field, mine, and forest, of toilsome endeavor thwarted by climatic adversity, of futilities of effort because of lack of understanding of the environment, of the drab, miserable, and precarious existence of millions of human beings. It is a wonderful project perhaps to study "how silk is produced and made into ribbons" but would such a project contemplate consideration of the content of life of the Japanese who furnish the raw material or of the conditions that led to the recent labor troubles in the New Jersey silk mills? An academic human geography study of the silk industry certainly would. "Impossible educational psychology to include or emphasize such matter in elementary school teaching?" Then why not put the emphasis on that which is wholesome and avoid this difficulty? Agreeing that the relationship idea is central to geography as a unique contribution to knowledge the approach may be either from the human side or the physical side and I contend for the latter.

5. The statement in regard to the mistakes and falsehoods told about peneplains is rather sweeping to say the least. But as it is not germane to the discussion, the point need not be argued further.

6. It was not asserted that the farmer knows his farm to be on a glacial moraine. He does know that his farm has distinctive topographic characteristics, notes on his travels that these are not widely duplicated, wonders why, and, if he is a very young farmer who has been taught elementary school human geography only, finds no answer.

QUESTIONS

What, actually, are the human geographers in their brightest dreams striving to achieve? In essence exactly that which the novelists have been endeavoring to do for a hundred years or more. They, the human geographers, wish to characterize, let us say, the Corn Belt as a geographical entity, approached and under-

stood thru its human inhabitants. No mean or despicable ambition that. But if only here and there thru the years a genius or near genius among the thousands of novelists succeeds in producing a characterization ("Main Street"?) that is recognized as a true picture of human life in a certain geographic setting "what price" the probable achievement of the few human geographers of America!

REACTIONS

Much of this new American school is in emulation of Vidal de La Blache, whose book, "Principles of Human Geography,"* has very recently been translated into English. This translation of the founder's work is very much to be commended to those who are endeavoring to follow in his footsteps. (And to all who are interested in geography.)

Even a very hasty scanning of its content will reveal that, far from starting with the man and coming back to the environment, Vidal La Blache almost invariably pursues the ancient and honorable method of geography, he considers first the scene, then how man is related to it. Two short quotations taken entirely at random from two consecutive pages must suffice to illustrate the point. "Mountains not only bring populations into being, they preserve them, once they have been created." (p. 146) "This basin furnishes the food supply of one of the densest populations in Italy." (p. 147)

It will of course be recognized that the significance and content of Vidal La Blache's work is not intended to be characterized by these short quotations. If such a characterization is attempted in brief it could fairly be that Vidal La Blache's works are *applied physical geography.* There remains a task which those ambitious for a new field may attempt. Let them give us a systematic regional geography based on physical geography and interpreted in the light of Vidal La Blache's writing, which surveys the world environment.

In their enthusiastic, if mistaken, embracing of the French teaching the human geographers overlook other things. One is that these Frenchmen have *finesse.* There is a suggestive quality, an incitement in Vidal La Blache's teaching. Coming from a lesser personage, or more prosaically put, stripped of recondite references, how much attention or following would a book of similar content attract?

*Henry Holt & Company, New York, 1926. Translation by M. T. Bingham.

What is even more completely overlooked is that French school children and German school children are compelled to undergo a very rigorous formal training in geography. A Vidal La Blache is the fine fruit of such training. To it he no doubt owed much of the breadth and the depth of scholarship that won him renown later.

FURTHER QUESTIONS

Are we, in America, now done forever with any and all *"formal"* instruction in these and allied topics in the grade schools? Is there to be no grounding in the fundamentals, the "minimum essentials" as they used to be called? Is the child to be altogether educated thru incidental absorption and a socialized experience and in no subject *trained* by being *compelled* to apply himself to the mastery of facts and principles? Is becoming acquainted with the physical features of the earth, of man's natural environment, in a systematic way during school years, to go completely into the discard? And if so, to what purpose?

CONCLUSION

In conclusion I quote from the "Announcement for Courses in Geography 1926-27," Columbia University, issued July 24, 1926, (p. 11) "As a basis for sound geographic work the candidate must have a thorough knowledge of the principles of physiography, including meteorology and climatology, and of the methods of map interpretation." In presenting himself for a qualifying examination for the degree of Doctor of Philosophy the candidate must in all cases include in the subjects offered "physiography and the special field of geography in which the candidate's researches will lie."

OPEN LETTER TO THE EDITOR

DEAR EDITOR:

You have indicated in your recent letter, asking for a rejoinder to Dr. Renner's paper, that in your opinion this should close the discussion in the pages of the *Journal*. Ought you not, rather, encourage its continuance? I shall personally refrain from further contributions but I should be very much enlightened I am sure by what others think on this subject considered as a practical school problem. There can be no question but that articles enlarging the content of geography are helpful to teachers, as also are those of pedagogical nature. But in these fields we are already rich. What is needed much more, it seems to me, is an understanding as to what should be the purposes and objectives of geographic instruction in the grades and the high schools. In the papers referred to* we have two opposed conceptions which, ignoring the personal reactions

* O. D. von Engeln, "Fresh Air and Sunshine," *Jour. of Geog.*, March, 1926, and G. T. Renner, Jr., "Geography's Affiliations," *Ibid*, Oct., 1926.

and differences in viewpoint, may be designed as the *naturalistic* and the *humanistic*. I contend that the emphasis in elementary school geography instruction should be put on making the student acquainted with the natural environment and the relations between this and human activities. The humanistic approach and emphasis, which Dr. Renner upholds, insists that we begin with man and learn incidentally how he is affected by and *affects his natural surroundings*—with chief attention to *his effects on* the surroundings.

This humanistic approach and content is in line with the program of socializing of education now so much in vogue. May I ask: Are thoughtful geography teachers generally agreed that our subject too must be made a social study? There is a world of men, a world of books, a world of nature, and a world of formal experiment and test, pure science. Children in the elementary schools are not sufficiently mature to profit greatly by the pure science; they get much of social contact and book experience in other subjects than geography—Why not have geography remain the study of the natural world learned ideally by observation, out-of-doors and from pictures, supplemented by texts?

The socializers are carrying on an active and insistent propaganda. They wish to absorb geography in their scheme. Have they succeeded in convincing geography teachers generally that this is desirable? I want to know. I think other teachers are similarly interested. Perhaps this letter will encourage many to write to you expressing an opinion (without their necessarily making a formal contribution for publication). What will geography gain by having almost all the emphasis placed on man and almost none on the environment? What will it lose? Is Dr. Renner right in considering that I am an old fogy, and that geography with the emphasis on the environment is of no significance in modern education—or is he wrong? If he is right, when and how are the children to learn the essential facts of their natural environment?

Very truly,

O. D. VON ENGELN

GEOGRAPHICAL PUBLICATIONS

R. H. Whitbeck. **Economic Geography of South America.** 430 pages, 197 photographs, maps, and grafs. McGraw-Hill Book Co., New York, 1926. $3.50.

Here is the much needed text for college courses in South American geography. Professor Whitbeck has given us an excellent book, written and organized in the manner already familiar to most of us from his previous writings.

The opening chapter deals with the continent as a whole, its location, framework, and major climate divisions, together with the broader and more obvious "influences" of these conditions on the course of history. Sixteen chapters are then devoted to the political units; Argentine, Brazil, and Chile being given several chapters each. The concluding chapter is a summary dealing largely with economic and commercial developments, and the commercial relationships with the United States. Each chapter is well illustrated by clear photographs, small detailed maps, and grafs. Some of the maps are borrowed from authoritative articles already in print. Especially to be commended are the sketched relief maps drawn by Guy Harold Smith of Wisconsin. At the end of each chapter and at the end of the book are selected bibliographies of the more readily available accessible publications which may be used for supplementary reading. Following the general bibliography are five tables of statistics, and an index.

The book is distinctly not regional. Within the political units, regions are mentioned, but aside from certain one-product areas, the organization and emphasis centers on the economic products. Regional economics rather than landscape interpretation describes the treatment. Furthermore, where regions are mentioned they are called physiographic, natural, and geographic without distinction. Enough has been done on the theory of geographic regions so that these terms do not need to be used synonymously.

The treatment of the several countries is, for the most part, excellently done. The areas of products are located on clear maps, and are interpreted accurately as regards the natural equipment, and as regards the economic, social, and political factors which effect them. The treatment of the tropical lowlands, however, may be criticized. The general statement that "white man cannot do hard out-of-door labor in the tropics . . . ." certainly does not apply to all parts of the tropics, for there are parts of this zone where white labor is apparently successful. Furthermore, recent information concerning the infertile character of Amazon soils, and probably of all mature soils on flat lands in the rainy low latitudes, prohibits the characterization of the Amazon as an area of "boundless food producing power." The old myth of tropical abundance should be set aside.

But after all these are controversial points; and how terrible it is to teach from a textbook with which we are in perfect agreement.

University of Michigan PRESTON E. JAMES

K. C. McMurry and R. B. Hall. **Source Book in the Geography of Commercial Production.** 334 pages, 60 figures. Edwards Brothers, Ann Arbor, Michigan. 1925.

The authors state in the preface that the book is "designed for use in supplementary reading in course 33, The Geography of Commercial Production, in the University of Michigan."

Of the 38 chapters four are given over to cereals, one to sugar, one to forage resources, four to animals, two to oils, one each to coffee, tea, cacao, and tobacco, eight to fibers, and two each to rubber and to timber. Altogether there are 293 pages of text, most of which are rich in geographical material. The text part is followed by 41 pages of tables.

According to the preface the material is taken from articles in the Yearbooks of the United States Department of Agriculture and from Commerce Monthly issued by the National Bank of Commerce of New York. By actual count over 70% of the pages of the text are excerpts from the Yearbooks for the three years 1921, 1922, and 1923, and in addition these volumes furnish most of the figures and doubtless much of the statistical matter. The volumes of the Commerce Monthly furnish about 23% of the text material.

It is at once evident that literary style is hardly possible where the context is made up of excerpts from several sources.

Since the real sources of the material, namely the Yearbooks, are so easily available one wonders if the title "Source Book" is happily chosen.

The climate classification as given will not be accepted without question, and the same may be said of the land surface regions. A number of the figures, for example Figure 13, World Wheat Acreage, do not give the year to which the data apply.

Geographers who possess the three Yearbooks named above will get little new material from the book under review. One even wonders if it would not be better for the students taking course 33 if they had to digest longer articles of the Yearbooks rather than have the important paragraphs picked out for them. The tendency is to spoon feed college students altogether too much.

University of Kansas C. J. POSEY

A Study of 81 Principal American Markets. 346 pp. 82 maps. 100,000 Group of American Cities, 15 North Wells St., Chicago, Ill. 1925. Price $10.00.

This publication was prepared for the use of business executives by an association of newspapers in the 81 cities covered by the study, and was intended to aid them in placing their advertising. Where the information of the Bureau of the Census was incomplete it was secured by R. L. Polk and Company, the city directory publishers. Populations of both the cities and their market areas are given and the character of such possible buyers analyzed. The number of merchants doing business in each city in 25 business lines are given. A map is included of the market area served by each city and there is an accurate summary of the outstanding characteristics of the city and its trading area. The names of all towns included in the trading area included in tables that analyze the kind of business carried on in each. Fourteen of the cities included had less than 100,000 population in 1920 but their suburbs bring their trading area all above that figure. The 81 cities chosen are good ones to be included in any list of minimum essentials for a course of study in geography. The book is a very useful publication for the geoprapher. It is large, well bound and printed, containing full and accurate information that required a great deal of expense to collect. The nominal price of the book is $10.00. However, it is sent free to business executives and it is possible that school libraries might obtain a copy at a favorable price.

State Normal School,
Cheney, Washington. O. W. FREEMAN

Stephen Sargent Visher. **Tropical Cyclones of the Pacific.** 163 pages, 20 diagrams, maps, and grafs. Bernice P. Bishop Museum Bulletin 20, Honolulu, 1925.

This study by Dr. Visher is an important contribution to our knowledge of the conditions in the low latitudes. He points out that tropical cyclones are not rare phenomena, but occur every month of the year in at least some part of the tropics, working havoc on the territory they cover, modifying in an important way the planetary circulation of air, and introducing widespread weather changes into middle latitudes. After a short introduction, 105 pages are devoted to a description and explanation of tropical cyclones, including their characteristics, their distribution and frequency, their origin, and the possible relationship between these storms and the major climatic changes induced by sunspots. Thirty-six pages are then given to a discussion of their direct and indirect effects on life in the tropics; and ten pages to descriptions by eye witnesses. Finally a bibliography of 209 references is presented. The text is well supplemented thruout by diagrams, maps, and grafs.

The reviewer believes that in the section dealing with the direct and indirect effects of tropical cyclones there is no adequate distinction between observed facts and scientific theories on the one hand, and on the other, some rather questionable hypotheses the verification of which would be very difficult. The author's treatment of the direct observable effects of winds, waves, and excessive rainfall is of great value; also the effect of these storms in spreading land and air forms of life from island to island may be admitted to a geographical study if properly supported by references to the work of specialists in zoogeography, as is this section of Dr. Visher's study. However, the reviewer feels that it is unwise and unnecessary for a geographer to discuss the possible effect of stormy weather on the development of the many species of life in the tropics by the stimulation of mutations. Scientists whose lives have been devoted to the study of biology are not in agreement as to the mechanism of mutation, and for a geographer to enter their field, even supported by references, must seem to them highly absurd—just as absurd as for a biologist to attempt the description and interpretation of the structure of an areal unit. Similarly the influence of tropical cyclones on the faith in fatalism and communism, on the stimulation of widespread sympathy in the world, or on the emigration of capable young men to more progressive parts of the world are subjects which the geographers as a rule are leaving to theologists, sociologists, and others. These things cannot be observed and verified by the methods of geographic research—namely by plotting them on a map to show their areal relations. According to this point of view, this material is not relevant to a geographical study, and cannot properly and scientifically be handled by one trained in geography.

However, this part of Dr. Visher's study is of lesser importance: his contribution to our knowledge of the mechanism of tropical cyclones, their distribution and frequency, and their effects on the meteorological conditions of the rest of the world, is of the greatest importance.

University of Michigan PRESTON E. JAMES